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| 09/711,691 | 11/13/2000 | Achim Michael Nuebling | 39199-9505 | 7139 |

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| EXAMINER | |
|---|---|
| TRAN, TAM D | |

| ART UNIT | PAPER NUMBER |
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| 2676 | |

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17

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. 09/711,691 | Applicant(s) NUEBLING ET AL. | |
|---|---|---|---|
| | Examiner Tam D Tran | Art Unit 2676 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *03* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *15 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-63* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-63* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-63 are rejected under 35 U. S.C. 103(a) as being unpatentable over Samuelson et al. (USPN 5361776) in view of Warner et al (USPN 6409659), hereinafter simply Samuelson and Warner.

2. In regard to claim 1, 23, 42, Samuelson teaches a method of a system for displaying physiological patient data from a cyclic physiological waveform, the method comprising the acts of: acquiring (sensing) the physiological patient data from the cyclic physiological waveform, see col.8 lines 61-67, the physiological patient data including a plurality of data points, each data point representing an amplitude of physiological patient data; see col.16 lines 23-30; and displaying the physiological patient data points in a colorized three dimensional representation. See col.17 lines 46-50. Samuelson does not teach assigning a first color to each data point having an amplitude in first range; assigning a second color to each data point having an amplitude in a second range; assigning a third color to each data point having an amplitude in a third range, the first color, the second color, and the first color, the second color, the third color all being different colors. However, Warner teaches assigning a first color to each data point having an

amplitude in first range; assigning a second color to each data point having an amplitude in a second range; assigning a third color to each data point having an amplitude in a third range, the first color, the second color, and the first color, the second color, the third color all being different colors. (the processor assigns a color according to the amplitude of the data point and plots the data point on the display monitor; the advantage of the invention to provide displaying amplitude differences of physiological patient data using a gray scale or color display presentation). See Fig.3, col.2 lines 5-15, col.3 lines 29-49. It would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the method for displaying physiological patient data of Warner into the method of use and implantable cardiac stimulator of Samuelson because the combination method of Samuelson and Warner would provide displaying amplitude differences of physiological patient data using color display presentation. See col.2 lines 12-15.

3. In regard to claims 2-5, 16-19, 26, 27, 45, 46, Samuelson teaches a method of a system for displaying physiological patient data, wherein it is inherent that physiological data is electrocardiogram data, blood pressure data, cardiac output data, pulse oximetry data. See col.17 lines 44-59.

4. In regard to claims 6, 7, 20, 28, 29, 48, Samuelson teaches a method of a system for displaying physiological patient data, wherein physiological patient data are stored in memory. See col.13 lines 65-68.

5. In regard to claims 8-10, 12, 21, 30, 37, 38, 49, 56-58, Samuelson teaches a method of a system for displaying physiological patient data, having parsing the physiological patient data into a series of waveforms, median waveforms. See col.16 lines 24-30.

6. In regard to claims 11, 47, 53, 54, 55, Samuelson teaches a method of a system for displaying physiological patient data, wherein the act of displaying further includes the act of assigning a representative X coordinate, Y coordinate, and Z coordinate, to each data point and plotting each data point on the display to produce a three dimensional representation, (the three dimensional display corresponding to X, Y, Z coordinates). See col.16 lines 24-30

7. In regard to claims 13, 14, 22, Samuelson teaches a method of a system for displaying physiological patient data, wherein signal data for displaying has specific range. See col.9 lines 38-44.

8. In regard to claim 15, Samuelson teaches a method of a system for displaying physiological patient data, the method comprising: acquiring the physiological patient data; see col.8 lines 61-67; storing the physiological patient data in a memory array; See col.13 lines 65-68; and displaying the physiological patient data in a colorized three dimensional representation, the act of displaying including parsing the physiological patient data into a series of waveforms such that each successive waveform is plotted in a temporal alignment to allow detection of long term trends in physiological data, see col.16 lines 24-30, the act of parsing each waveform into a series of successive data points such that each data point has a coordinate that is plotted on the display to produce a three dimensional representation, each successive data point having a discrete amplitude, and assigning a color according to the amplitude of the data point if the amplitude is within the relevant range. See Fig.10, col.16 lines 60-67. Samuelson does not teach assigning a first color to each data point having an amplitude in first range; assigning a second color to each data point having an amplitude in a second range; assigning a third color to each data point having an amplitude in a third range, the first color, the second color, and the first

color, the second color, the third color all being different colors. However, Warner teaches assigning a first color to each data point having an amplitude in first range; assigning a second color to each data point having an amplitude in a second range; assigning a third color to each data point having an amplitude in a third range, the first color, the second color, and the first color, the second color, the third color all being different colors. (the processor assigns a color according to the amplitude of the data point and plots the data point on the display monitor; the advantage of the invention to provide displaying amplitude differences of physiological patient data using a gray scale or color display presentation). See Fig.3, col.2 lines 5-15, col.3 lines 29-49. It would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the method for displaying physiological patient data of Warner into the method of use and implantable cardiac stimulator of Samuelson because the combination method of Samuelson and Warner would provide displaying amplitude differences of physiological patient data using color display presentation. See col.2 lines 12-15.

9. In regard to claim 24, 43, Samuelson teaches a method of a system for displaying physiological patient data, and comprising monitors device as the source of physiological patient data. See col.7 lines 35-45.

10. In regard to claim 25, 44, Samuelson teaches a method of a system for displaying physiological patient data, electronic system having sensor or transducer. See col.8 lines 7-10.

11. In regard to claims 31-33, 40, 50-52, 59, Samuelson teaches a method of a system for displaying physiological patient data, and comprising monitors device as the source of physiological patient data; See col.7 lines 35-45. It is inherent that the monitor can be black-white or color and having pixels.

12. In regard to claims 34-36, 39, Samuelson teaches a method of a system for displaying physiological patient data, wherein the electronic system has processor and software. See col.12 lines 5-10.

13. In regard to claim 41, Samuelson teaches a software program for generating a display of physiological data from a cyclic physiological waveform, the software program comprising:(a) a program module for acquiring the physiological patient data; see col.8 lines 61-67; (b) a program module for storing the physiological patient data in a memory array; See col.13 lines 65-68; (c) a program module for displaying a three dimensional representation; (d) a program module for setting the current waveform to the first waveform in the waveform array; see col.16 lines 24-30; (e) a program module for providing a Z coordinate counter and initializing the Z coordinate counter to zero; (f) a program module for providing a X coordinate counter and initializing the X coordinate counter to zero; (g) a program module for providing a Y coordinate counter and initializing the Y coordinate counter to zero; (h) a program module for providing a determining the pixel color based on the Y coordinate of the data point; (i) a program module for plotting the current data point of the current waveform at the current coordinate in the color determined in (h);(j) a program module for incrementing the X coordinate counter and repeating (h) and (i) until all data points in the current waveform are plotted; and (k) a program module for incrementing the Z coordinate counter and repeating (h)-(j) until all waveforms in the waveform array are plotted; (the three dimensional display corresponding to X, Y, Z coordinates, image being display in an increment (count) process of pixel by pixel along the X coordinate and Y coordinate), see col.16 lines 24-30; Samuelson does not teach assigning a first color to each data point having an amplitude in first range; assigning a second color to each data point having an

amplitude in a second range; assigning a third color to each data point having an amplitude in a third range, the first color, the second color, and the first color, the second color, the third color all being different colors. However, Warner teaches assigning a first color to each data point having an amplitude in first range; assigning a second color to each data point having an amplitude in a second range; assigning a third color to each data point having an amplitude in a third range, the first color, the second color, and the first color, the second color, the third color all being different colors. (the processor assigns a color according to the amplitude of the data point and plots the data point on the display monitor; the advantage of the invention to provide displaying amplitude differences of physiological patient data using a gray scale or color display presentation). See Fig.3, col.2 lines 5-15, col.3 lines 29-49. It would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the method for displaying physiological patient data of Warner into the method of use and implantable cardiac stimulator of Samuelson because the combination method of Samuelson and Warner would provide displaying amplitude differences of physiological patient data using color display presentation. See col.2 lines 12-15.

14. In regard to claims 60, 61, Samuelson teaches a method of a system for displaying physiological patient data, wherein the amplitude of the physiological patient data relates to an amplitude of the cyclic physiological waveform. See col.16 lines 50-67.

15. In regard to claim 62, 63, Samuelson teaches a method of a system for displaying physiological patient data, wherein the cyclic physiological waveform represents the physiological parameter. See col.16 lines 50-67.

*Conclusion*

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Tam D. Tran** whose telephone number is **703-305-4196**. The examiner can normally be reached on MON-FRI from 8:30 – 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Matthew Bella** can be reached on **703-308-6829**.

**Any response to this action should be mailed to**:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

**(703) 872-9314 (for Technology Center 2600 only)**

Hand-delivered response should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Tam Tran
TT
Examiner

Art unit 2676

Matthew C. Bella

MATTHEW C. BELLA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600